



Sowing and Reaping Success through Intensive Management



Left: Norman Roth and his children, Cami and Colton, walk through one of their wheat fields in Reno County, Kansas. We chose the Roths as Grower of the Month because their farm is an integration of wheat, row crops and cattle. Reno County Extension Agent Greg McCormack talked with Norman about how he uses crop rotation, weed and disease control and integration in his farm's operations.

By Greg McCormack, Reno County Extension Agent

Intensive Management, with attention to detail, is the best way to describe the Roths' approach to crop and livestock production. This South Central Kansas farm lies in the Northwest portion of Reno County, an area of diverse agriculture.

The operation consists of equal thirds of wheat, row crops and cattle. Norman Roth is the fourth generation on the current farm site. His father, Charles, now semi retired, was in partnership with Norman until 1997. Norman's wife, Cindy, grew up on the opposite side of Reno County. Children, Cami and Colton, help around the farm. It's easy to see farming may be in their future as they ask questions on varieties and leaf rust during a recent look at some wheat fields. Roger Erteld, farm employee, rounds out the workforce on the farm.

Norman describes the benefit of knowledge gained from K-State Research and Extension as "an extra 10 bushels of wheat per acre." The Roths have participated in educational meetings, Wheat Variety plots, research plots, Field Days at the South Central Experiment Field and farm tours. They are also members of the KSU Farm Management Association.

Norman has also served as the Vice President of the Reno County Extension Council and served on the board of the Reno County Cattlemen's Association. The family is active in the Grace Bible Church, and they also enjoy vacationing in Branson, MO.

Norman is as enthusiastic about the prospects for growing wheat as his management if the crop intensifies and yields go up. Crop rotation is the key to growing high yielding crops in his area.

"A rotation is more work and management, but it is the only way to make it work long term," he said.

Wheat is grown in a rotation with row crops, including grain sorghum, corn, soybeans and sunflowers. The rotation typically consists of 3-4 years of row crops, to clean up weeds and disease, followed by 3-4 years of wheat. However, Norman feels it's important to "not be set in concrete

with the rotation. If you do the same thing over and over, certain species will adapt and thrive." A combination of no-till, strip till and minimum till are used on the farm, depending on where the crop is in the rotation.

Fertility is also an important part of his management. Adequate amounts of macronutrients combined with some micronutrients have helped increase yields in recent years. Soil testing is used to determine fertilizer amounts. Soil pH is also important, and lime is applied when needed. One management decision that will be considered in the future will be the use of fungicides to help control diseases.


Wheat growers in the area face problems with winter annual grasses and wind erosion. He tackles the problem of weeds, such as cheat, with a combination of crop rotation and herbicides. Where cheat becomes a problem, the rotation is shortened, so wheat is only in for 2-3 years. Herbicides are also used, but only as edge or spot treatments.

The entire Roth farm is integrated: wheat helps row crops with weed control; row crops help with weed and disease control in the wheat; the livestock operation uses crop residues, hay and grazing from the crops. Although crops are two-thirds of the operation, it is easy to tell the cow-calf herd is Norman's pride and joy.

Cows spend the summer on native range, often in a rotational grazing system. Fall is spent on sorghum residue, and winter is in the lot or grazing wheat pasture.

The future at Roth farms is bright, but they know challenges lie ahead. With about 50 percent growth in crop acreage in the last 8 years, Norman is unsure what growth on the farm will be in the next 8 years. Growth beyond current levels will tax the management, labor and machinery resources of the farm.

"I don't want to be one of the biggest farms around, but I would like to be one of the best," Norman said. To read more about the Roths, please visit our Web site.



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We are Areawide Pest Management for Wheat, a five-year project developed by the USDA Agricultural Research Service, to demonstrate pest management practices for the Russian wheat aphid and greenbug. Our main goal is to collaborate with wheat producers in evaluating and demonstrating non-chemical pest management techniques, with particular emphasis on the management of the Russian wheat aphid and the greenbug. The elements of our program include:

- *Crop Diversification*
- *Variety Selection*
- *Field Monitoring and biocontrol*
- *Best Management practices for Wheat*

Knowing what's needed...

Producers in Norman Roth's area typically deal with winter annual grasses and soil erosion. To deal with this problem, Norman uses a combination of crop rotations and herbicides. He diligently checks his soil for pH as well as to determine fertilizer needs. He also uses a combination of no-till, strip till and minimum till, depending on the crops in the rotation. To read more about the Roths, please visit our Web site.



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